



Monday, July 25, 1999 10:42 AM

HTCC#1.seq.mpd. (1 > 1200) Site and S Inca

Enzymes: All 515 enzymes (No Filler)

Inserts: Circular, Certain Sites Only, Standard Genetic Code

HTCC-1 FL Sequence

Page 1

CAGGCATGAGCAGAGCGCTTCATCATCGATCCAAAGCATCAGTGGCAATTGACGGCTTGTACGACCTCTGGGGATTGGATTACCCAAACCAAGGGGGTATCGT  
GTCCGTACTCGTCTCGCAAGTAGTAGCTAGGTTCCTAGTACGCGTAACCTGCCGAACATGCTGGAAGACCCCTAACCTTATCGGTTGGTTCCCCCATAGGA

100

HTCC-1 FL  
N S R A F I I O P T I S A I O G L Y O L L G I G I P N O G G I L

TTACTCTCACTAGAGTACTTCGAAAAAGCCCTGGAGGAGCTGGCAGCAGCGTTTCGGGTGATGGCTGGTTAGGTTGGCCCGCGGACAAATACGCCCGC  
AATGAGGAGTGATCTCATGAAGCTTTTTCGGGACCTCTCTGACCGTCTGCGCAAAGGCCCACTACCGACCAATCCAAGCCGGCGCCTGTTTATCGCGCCG

200

HTCC-1 FL  
Y S S L E Y F E K A L E E L A A A F P G D G W L G S A A D X Y A G

AAAAACCGCAACCACGTGAATTTTTCCAGGAACCTGGCAGACCTCGATCGTCAGCTCATCAGCCTGATCCACGACCAAGCCGCTCCAGACGACCC  
TTTTTGGCGTTGGTGCACCTTAAAAAAGGTCTTACCGCTCTGGAGCTAGCAGTCTGAGTCTGGGACTAGGTGCTGGTTCGGTTCGCCAGGTCGTCTGGG

300

HTCC-1 FL  
K N R N H V N F F Q E L A O L O R O L I S L I H O Q A N A V C T T

GCGACATCCTGGAGGGCGCAAGAAAGGTCTCGAGTTCGTCGCCCGGTGGCTGTGGACCTGACCTACATCCCGGTCTGCGGCACGCCCTATCGGCCGC  
CGCTGTAGGACCTCCCGCGGTTCTTTCCAGAGCTCAAGCACGCGGCCACCGACCTGGACTGGATGTAGGGCCAGCAGCCCGTGGGGATAGCCGGCG

400

HTCC-1 FL  
R O I L E G A X K G L E F V R P V A V O L T Y I P V V G H A L S A A

CTTCAGGCGCGGTTTTTCGCGGGCGCGATGGCGGTAGTGGCGCGCGCTTGCTTACTTGGTCTGAAAACGCTGATCAACGCGACTCAACTCCTCAA  
GAAGGTCCGCGGCAAAACGCGCGCGCTACCGGCATCACCAGCGCGCGGAACGGATGAACAGCACTTTTGGGACTAGTTGCGCTGAGTTGAGGAGTTT

500

HTCC-1 FL  
F Q A P F C A G A N A V V G G A L A Y L V V K T L I N A T O L L K

TTGCTTGCCAAATTGGCGGAGTTGGTCGCGCGCGCCATTGCGGACATCATTTGCGATGTGGCGGACATCATCAAGGGCACCTCGGAGAAGTGTGGGAGT  
AACGAACGGTTTAACCGCTCAACCAGCGCGCGGTAACGCCCTGTAGTAAAGCCTACACGCTGTAGTAGTTCCCGTGGGAGCCTCTTACACCTCA

600

HTCC-1 FL  
L L A K L A E L V A A A I A O I I S O V A O I I K G T L G E V W E

TCATCAAAACGCGCTCAACGGCTGAAGAGCTTTGGGACAAGCTCACGGGGTGGGTGACCGGACTGTTCTCTCGAGGGTGGTCAACCTGGAGTCCTT  
AGTAGTGTTCGCGGAGTTGCCGGACTTTCTCGAAACCTGTCGAGTGCCCCACCCACTGGCTGACAAGAGAGCTCCACACAGCTGGACCTCAGGAA

700

HTCC-1 FL  
F I T N A L N G L K E L W D K L T G W V T G L F S R G W S N L E S F

CTTTGCGGGCGTCCCGGCTTGACCGGCGGACAGCGGCTTGTGCGAAGTACTGGCTTGTTCGGTGGCGCGGCTGTGTCGCATCGTGGGCTTGGCT  
GAAACGCGCGCAGGGGCGGAACGCGCGGCTGGTTCGCGAAGAGCGTTCACTGACCGAACAAGCCAGCGCGGCGGAGACAGGCTAGCAGCCCGAACCGA

800

HTCC-1 FL  
F A G V P G L T G A T S G L S O V T G L F G A A G L S A S S G L A

Fig. 6

sheet 1 of 2

Monday, July 25, 1999 10:42 AM

Page 2

TCC#1.sec.mcd.(1 > 1200) Site and 3

CACGCGGATAGCCTGGCGAGCTCAGCCAGCTTSCCCSCCTSSCEGGCATTSGGGGCGGGTCCGCTTTTSCGGCCTTSCCGAGCCTCGGCTCAGGTCCATG  
GTGCGCTTATCGGACCGCTCGAGTCGGTCCGAACSGGCGGACCGCGCTAACCCCGCCAGGCCAAAACCCCGAACGGCTCGGACCGAGTCCAGGTAC 900

HTCC-1 FL  
H A D S L A S S A S L P A L A G I G G G S G F G G L P S L A Q V H  
CCGCCTCAACTCGGCAGGCGCTACGGCCCCGAGCTGATGGCCCGGTGGGCGCCGCTGCCGAGCAGGTCCGGCGGGCAGTCCGACCTGGTCTCCGCGCAGGC 1000  
GGCGGAGTTGAGCGCTCCGCGATGCCGGGGCTCGACTACCGGGCCAGCCGCGGGCGACGGCTCGTCCAGCCGCCCTCAGCGTCGACCAGAGGCGCGTCCC

HTCC-1 FL  
A A S T R Q A L R P R A D G P V G A A A E Q V G G Q S Q L V S A Q G  
TTCCCAAGCTATGGGCGGACCCGTAGGCATGGCGGCATGCACCCCTCTTCGGGGGCGTCCGAAAGGGACGACGACGAAGAAGTACTCGGAAGCGCGCGG 1100  
AAGGGTTCCATACCGCGCTGGGCATCCGTACCCGCGTACGTGGGGAGAAGCCCCCGCAGCTTTCCCTGCTGCTGCTTCTTCATCAGCCTTCCGCGCCGC

HTCC-1 FL  
S Q G H G G P V G H G G H H P S S G A S K G T T T X X Y S E G A A  
GCGGGCACTGAAGACGCCGAGCGCGCGCCAGTCGAAGCTGACGGGGCGGTGGGCAAAAGGTGCTGGTACGAAACSTCGTCTAACGGCATGGCGAGCCAA 1200  
CGCCCCGTGACTTCTGCGGCTCGCGCGCGGTTCAGCTTCGACTGCGCGCGCCACCEGTTTTCCACGACCATGCTTTGCAGCAGATTGCCGTACCGCTCGGTT

HTCC-1 FL  
A G T E D A E R A P V E A D A G G G Q X V L V R N V V

FIG. 6

Sheet 2 of 2

Monday, July 25, 1999 10:49 AM  
TCC1(1:232) Map.mpd (1 > 726) Site Seq  
Enzymes: 212 of 515 enzymes (Filtered)

HTCE-1 (1-22x)

Page 1

Settings: Linear, Certain Sites Only, Standard Genetic Code

```
ATGCATCACCATCACCATCACATGAGCAGAGCGTTCATCAGATCCAACGATCAGTGGCATTGACGGCTTGATACGACCTTCGCGGATTTGGAATACCCA 100
TACGTAGTGGTAGTGGTAGTGTACTGCTCTGCAAGTAGTAGCTAGGTTCCTAGTCACGGTAACCTGCCGAACATGCTGGAAGACCCCTAACCTTATGGCT
M H H H H H H H S R A F I I O P T I S A I O G L Y O L L G I G I P
ACCAAGGGGGTATCCTTTACTCTCTACTAGAGTACTTGGAAAAGCCCTGGAGGAGCTGGCAGCAGCGTTTCGGGGTATGGCTGGTTAGGTTTCGGCCGC 200
TGGTTCCCCCATAGGAAATCAGGAGTGTATCTCATGAACCTTTTCGGGACCTCTCTGACCGCTGCTGCGAAAGGCCCACTACCGACCAATCCAAGCCGGCG
M O G G I L Y S S L E Y F E X A L E E L A A A F P G O G W L G S A A
GGACAAATACGCCCGGCAAAAACCGCAACCACGTGAATTTTTCCAGGAACTGGCAGACCTCGATGCTCAGCTCATCAGCTTGATCCAGCACCAGGCCAAC 300
CTGTGTTTATGCGGCCGTTTTCGGCGTTGGTGCACCTTAAAAAAGGTCTTGACCGCTCTGGAGCTAGCAGTCCAGTAGTGGGACTAGGTGCTGGTCCGGTTG
O K Y A G K N R N H V N F F O E L A O L D R O L I S L I H O O A N
GCGGTCCAGACGACCGCGACATCCTGGAGGGCGCCAAGAAAGTCTCGAGTTCGTGCGCCCGGTGGCTGTGCACCTGACCTACATCCCGGTCTGCGGGC 400
CGCCAGGTCTGCTGGCGCTGTAGGACCTCCCGCGTTCTTTCCAGAGCTCAAGCAGCGCGGCCACCGACACCTGGACTGGATGTAGGGCCAGCAGCCCG
A V Q T T R O I L E G A X X G L E F V R P V A V O L T Y I P V V G
ACGCCCTATCGGCCGCTTCCAGGCGCGCTTTTCGGCGGGCGGATGGCCGTAGTGGGCGCGCGCTTGCCCTACTTGGTGTGAAAACGCTGATCAACGC 500
TGCGGGATAGCCCGCGGAAGTCCGCGGCAAAACGCGCCCGCTACCGGCATCACCCGCGCGCGGAACGGATGAACCAGCAGCTTTTGGGACTAGTTGGC
H A L S A A F O A P F C A G A M A V V G G A L A Y L V V K T L I N A
GACTCAACTCTCTCAAATTGCTTGCCAAATTGGCGGAGTTCCTCGCGGCCGCCATTGCGGACATCATTCGGATGTGGCGGACATCATCAAGGCCATCCTC 600
CTGAGTTGAGGAGTTTAACGAACGGTTTAACCGCTCAACCAGCGCGCGGTAACGCCCTGTAGTAAAGCCTACACCGCCTGTAGTAGTTCCCGTAGGAG
T O L L X L L A X L A E L V A A A I A O I I S O V A O I I X G I L
GGAGAAGTGTGGGAGTTCATCACAACCGGCTCAACGGCCTGAAAGAGCTTTGGGACAAGCTCACGGGTGGGTGACCGGACTGTTCTCTCGAGGGTGGT 700
CCTCTTCACACCTCAAGTAGTGTTCGCGGAGTTGCGGACTTTCTCGAAACCTGTTCGAGTGCCCCACCCACTGGCCTGACAACAGAGCTCCACCA
G E V W E F I T N A L N G L X E L W O X L T G W V T G L F S R G W
CGAACCTGGAGTCTTCTAAGATTCT 726
GCTTGGACCTCAGGAAGATTCTTAAG
S N L E S F E F
```

FIG. 7a

Monday, July 25, 1999 10:50 AM

HTCC-1 (134-572)

Page

HTCC1(184-392) Map.mpd (1 > 881) S1 125 mcs

Enzymes: 212 of 515 enzymes (Filtered)

Settings: Linear, Certain Sites Only, Standard Genetic Code

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ATGCAATCACCATCACCATCAGATGTGGCGGACATCATCAAGGGCATCTCGGAGAAGTGTTGGGAGTTCAATCAAAACGGCTCAACGGGCTGAAAGACC 100
TACGTAGTGGTAGTGGTAGTGCTACACCGCCTGTAGTAGTTCCCGTAGGAGCCTCTTCACACCCTCAAGTAGTGTTCGGCGAGTTGCCGGACTTTCTCG
M H H H H H H O V A O I I X G I L G E V W E F I T N A L N Q L X E
TTTGGGACAAGCTCAACGGGGTGGGTGACCGGACTGTTCTCTCGAGGGTGGTGAACCTGGAGTCCTTCTTTGGCGGGCTGCCCGGCTTGACCGGCGCGAC 200
AAACCCCTGTTTCGAGTGCCCCACCCACTGGCCTGACAAAGAGAGCTCCACCCAGCTTGGACCTCAGGAAGAAACGGCCCGGAGGCGGCGAATCGCCGCGCTG
L W O X L T G W V T G L F S R G W S H L E S F F A G Y P G L T G A T
CAGCGGCTTGTGCAAGTGACTGGCTTGTTCGGTGGCGCCGCTGTGTCGGCATGTCGGGCTTGGCTCAGCGGGATAGCCTGGCGAGCTCAGCCAGCTTG 300
GTGCGCGAAGCAGCGTTCACTGACCGAACAAGCCACGCGCCGAGACAGGCGTAGCAGCCCGAACCAGAGTGGCGCTATCGGACCGCTCGAGTCGGTCTGAAC
S G L S O V T G L F G A A G L S A S S G L A H A O S L A S S A S L
CCCGCCCTGGCGCGCATTTGGGGCGGGTCCGGTTTTTGGGGCTTGGCGAGCCTGGCTCAGGTCCATGCCCGCTCAACTGGCGAGGCGCTACCGCCCCGAG 400
GGGCGGGACCGCGCTAACCCCCGCGCCAGGCCAAAACCCCGAAGCGCTCGGACCGAGTCCAGGTACGGCGGAGTTGAGCCGTCCCGCATGCCCGGGGCTC
P A L A G I G G G S G F G G L P S L A O V H A A S T R O A L R P R
CTGATGCCCCGGTCGGCGCGCTGCCGAGCAGGTCCGGCGGCGAGTCGCAGCTGGTCTCCGCGCAGGGTTCCCAAGGTATGGCGGACCCGTAGGCATGGG 500
GACTACCGGGCCAGCCGCGCGGACGGCTCGTCCAGCGCGCCGTCAGCGTCGACCGAGGCGCGTCCCAAGGGTTCCATACCCGCGCTGGGCATCCGTACCC
A D G P V G A A A E O Y G G O S O L V S A O G S O G H G G P V G H G
CGGCATGCACCCCTCTTCCGGGGCGTGAAGAGGACGACGAGGAAGTACTCGGAAGGCGCGCGCGCGGCGGCTCAAGACGCGGAGCGCGCGCCAGTC 600
GCCGTACGTGGGGAGAAGCCCCCGCAGCTTCCCTGCTGCTGCTTCTTCATGAGCCTTCCGCGCGCGCGCGCGGCTGACTTCTCGGGCTCGCGCGCGGTCAG
G H H P S S G A S K G T T T K X Y S E G A A A G T E O A E R A P V
GAAGCTGACCGGGCGGTGGGCAAAAGGTGCTGTACGAAACGTCGTCTAACGGCGAATTC
CTTCGACTGCGCCCGCCACCCGTTTTCCACGACCATGCTTTGCAGCAGATTGCCGCTTAAG 881
E A O A G G O X V L Y R N V V R R I
```

FIG. 7b

on: July 26, 1999 10:48 AM

H1C-1 (1-123)

Page 1

TCC1(1-129) Map.MPO (1 > 411) d sequence

enzymes: All 515 enzymes (No Filter)

aligns: Circular, Certain Sites Only, Standard Genetic Code

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ATGCATCACCATCACCATCACATGAGCAGAGCGTTCATCGATCCAACGATCAGTGGCATTGACGGCTTGACGACCTTCTGGGGATTGG
TACGTAGTGGTAGTGGTAGTGTACTCGTCTCGCAAGTAGTAGCTAGGTTGCTAGTCACGGTAACTGCCGAACATGCTGGAAGACCCCTAACC
N H H H H H H H M S R A F I I O P T I S A I O G L Y C L L G I G
AATACCCAACCAAGGGGGTATCCTTTACTCTCACTAGAGTACTTCGAAAAAGCCCTGGAGGAGCTGGCAGCAGCGTTTCCGGGTGATGGCT
TTATGGGTTGGTTCCCCCATAGGAAATGAGGAGTGATCTCATGAAGCTTTTTCCGGACCTCTCGACCGTCTCGCAAAGGCCCACTACCGA
I P N O G G I L Y S S L E Y F E K A L E E L A A A F P G D G
GGTTAGGTTCCGGCCGCGGACAAATACGCCGGCAAAAACCGCAACCACGTGAATTTTTCCAGGAAGTGGCAGACCTCGATCGTCAGCTCATC
CCAATCCAAGCCGGCGCCTGTTTATGCGGCCGTTTTTGGCGTTGGTGCACTTAAAAAAGGTCCTTGACCGTCTGGAGCTAGCAGTCGAGTAG
W L G S A A O X Y A G X N R N H V N F F Q E L A O L O R O L I
AGCCTGATCCACGACCAGGCCAACGGTCCAGACGACCCGCGACATCCTGGAGGGCGCCAAGAAAGGTCTCGAGTTTCGTGCGCCCGGTGGC
TCGGACTAGGTGCTGCTCGGTTGCGCCAGGTCTGCTGGGCGCTGTAGGACCTCCCGCGGTTCTTTCCAGAGCTCAAGCACGCGGGCCACCG
S L I H O O A N A V O T T R O I L E G A X K G L E F V R P V A
TGTGGACCTGACCTACATCCCGGTCGTCGGGCAAGCCCTATAG
ACACCTGGACTGGATGTAGGGCCAGCAGCCCGTCCGGGATATC
V O L T Y I P V V G H A L
```

FIG. 7c

Monday, July 26, 1999 10:48 AM

Ka12-HICC-1

Page

20000726.1 (1 > 1829) Site and ...

Enzymes:

All STS Enzymes (No Filter)

Settings:

Linear, Certain Sites Only, Standard Genetic Code

```
CATATGCATCACCATCACCATCACACGGCGCGCTCCGATAACTTCAGCTGTCCAGGGTGGGCAGGGATTCCCATTCGGATCCAGGCGGATGCCGA
GTATACGTAGTGGTAGTGGTAGTGTGCCGGCGCAGGCTATTGAAGGTGACAGGGTCCCAACCGTCCCTAAGCGGTAAGGCTAGCCCGTCCGCTACCGCT
|----- Met / HIS TAG -----| Ra12
H H H H H H H H T A A S D N F Q L S Q G G Q G F A I P I G O A M A
TCGCGGGCCAGATCCGATCGGGTGGGGGTACCCACCGTTCATATCGGGCTTACCGCTTCTCTGGCTTGGGTGTTGTGACAACAACGCCAACGGCGC
AGCGCCCGGCTTAGGCTAGCCACCCCGAGTGGGTGGCAAGTATAGCCCGGATGGCGGAAGGAGCCGAACCCACAACAGCTGTGTGTGCCGTTGCCGCG
|----- Ra12 -----|
I A G O I R S G G G S P T V H I G P T A F L G L G V V D N N G N G A
ACGAGTCCAACCGGTGGTTCGGGAGCGCTCCGGCGGCAAGTCTCGGCATCTCCACCGCGGACGTGATCACCGCGGTCGACGGCGCTCCGATCAACTCGGCC
TGCTCAGGTTGCCGACCAGCCCTCGCGAGGCGCGCTTCAGAGCGTAGAGGTGGCGCTGCACTAGTGGCGCCAGCTGCCCGGAGGCTAGTTGAGCCG3
|----- Ra12 -----|
R V Q R V V G S A P A A S L G I S T G D V I T A V O G A P I N S A
ACCGCGATGGCGGACCGCGCTTAACGGGCATCATCCCGGTGACGTATCTCGGTGACCTGGCAACCAAGTCGGCGGGCAGCGTACAGGGAACGTGACAT
TGGCGCTACCGCTGCGCGAATTGCCCGTAGTAGGGCACTGCAGTAGAGCCACTGGACCGTTTGGTTACGCGCGCGTGGCGATGTCCCTTGCACTGTA
|----- Ra12 -----|
T A M A D A L N G H H P G D V I S V T W O T X S G G T R T G N V T
TGGCGGAGGGACCCCGGCGGAATTCCTAGTACCTAGAGGTTCAATGAGCAGAGCGTTTCATCATCGATCCAACGATCAGTCCCATTTGACGGCTTGTACGA
ACCGGCTCCCTGGGGGCGCGCTTAAGGATCATGGATCTCCAAGTTACTCGTCTCGCAAGTAGTAGCTAGGTTGCTAGTACGGTAACGCGGAACATGCT
|----- Ra12 -----| EcoRI | Thrombin | HTCC1
L A E G P P A E F L V P R G S H S R A F I I D P T I S A I D G L Y O
CCTTCTGSGGATTGGAATACCAACCAAGGGGTATCCTTTACTCCTCACTAGAGTACTTCGAAAAAGCCCTGGAGGAGCTGGCAGCAGCGTTTCCGGGT
CGAAGACCCCTAACCTTATGGGTTGGTTCCCCATAGGAATGAGGAGTGATCTCATGAAGCTTTTTCGGGACCTCTCGACCGTCTCGCAAGGCCCA
|----- HTCC1 -----|
L L G I G I P N G G G I L Y S S L E Y F E X A L E E L A A A F P G
GATGGCTGGTTAGGTTGGCGCGCGGACAAATACCGCGGCAAAACCGCAACCAAGTGAATTTTTTCCAGGAACCTGGCAGACCTCGATCGTCAGCTCATCA
CTACCGACCAATCCAAGCGCGCGCTGTTTATGCGGCGGTTTGGCGGTGGTGCACTTAAAAAGGTCTTTGACCGTCTGGAGCTAGCAGTCTGAGTAGT
|----- HTCC1 -----|
D G W L G S A A D K Y A G K N R N H V N F F O E L A D L O R O L I
GCCTGATCCACGACCAGGCCAACGCGGTCCAGACGACCCCGGACATCTGGAGGGCGGCCAAGAAAGTCTCGAGTTCTGCGCCCGGTGGCTGTGGACCT
CGGACTAGGTGCTGGTCCGTTTGGCCAGGTCTGCTGGGCGCTGTAGGACCTCCCGCGGTTCTTTCCAGAGCTCAAGCACGGGGCCACCGACACTGGA
|----- HTCC1 -----|
S L I H D O A N A V O T T R D I L E G A K K G L E F V R P V A V O L
GACCTACATCCCGGTCTGTCGGGACCGCCCTATCGGCGGCTTCCAGGCGCGCTTTTTCGGCGGGCGCGATGGCGGTAGTGGCGCGCGCGCTTCCCTACTTG
CTGGATGTAGGGCCAGCAGCCCGTGGGGATAGCCGGCGGAAGTCCCGCGGCAAAACGCGCGCGGCTACCGGCATACCCCGCGCGGGAACGGATGAAC
|----- HTCC1 -----|
T Y I P V V G H A L S A A F O A P F C A G A H A V V G G A L A Y L
```

FIG. 8

Sheet 1 of 2

enday, July 25, 1999 10:48 AM

2(Th)hTCC1.mod (1 > 1829) Site and S inc

Page 2

ATCGTGA AAAACGGTCGATCAACGGGACTCAACTCCCAAAATTGCTTGGCAAATTGGCGGAGTTGGTCGGCGCCGCAATTGGGACATCATTTCCGATGTGG  
TAGCACTTTTTCGGACTAGTTGCGCTGAGTTGAGGAGTTTAAACGAACGGTTTAAACCGCTCAACCAAGCGCGCGGTAACGCTGTAGTAAAGCCTACACC 1000  
hTCC1  
V V X T L I N A T O L L K L L A X L A E L V A A A I A O I I S O V  
CGGACATCATCAAGGGCATCTCTCGGAGAGTGTGGGAGTTTCATCACAACCGGCTCAACGGCTGAAAGAGCTTTGGGACAAGCTCACGGGGTGGGTCAC  
GCTGTAGTAGTTCCCGTAGGAGCCTCTTCACACCTCAAGTACTGTTTGGCGGAGTTGGCGGACTTTCTCGAAACCTGTTCGAGTGCCCCACCCACTG 1100  
hTCC1  
A O I I X G I L G E V W E F I T N A L N G L X E L W O X L T G W V T  
CGGACTGTCTCTCGAGGGTGGTCGAACCTGGAGTCTCTTTTCGGGGCTCCCGGCTTTCACCGCGCGGACCGAGCGGCTTGTGCAAGTGACTGGCTTG  
GCTGACAAGAGAGCTCCCAACAGCTTGGAGCTCAGGAACAAACGCGCGAGGGGCGGAAC TGGCGCGCTGCTGCGCGAACAGCGTTCACTGACCGAAC 1200  
hTCC1  
G L F S R G W S N L E S F F A C V P G L T G A T S G L S O V T C L  
TTCGGTGGGCGCGTCTGTCCGCTCGTGGGGCTTGGCTCAGCGGATAGCCTGGCGAGCTCAGCCAGCTTGGCGCGCTGGCGGCGGCTTGGGGGGGGGT  
AAGCCACGCGCGCGCAGACAGGCGTAGCAGCGCGAACCGAGTGCCTATCGGACCGCTCGAGTCGGTTCGAACGCGCGGACCGCGCTAACCCCGCGCCA 1300  
hTCC1  
F G A A G L S A S S G L A H A O S L A S S A S L P A L A G I G G G  
CGGTTTTGGGGGCTTGGCCAGCCTGGCTCAGGTCCATGCCCTCAACTCGGCAGGCGCTACGGCCCGGAGCTCATGCCCGGTGGCGGCGGTGCCSA  
GGCCAAAACCCCGAAGCGCTCGGACCGAGTCCAGGTACGGCGGAGTTGAGCGGTCGCGGATGCGCGGCTCCACTACCGGCGGAGCGCGGCGAGCGCT 1400  
hTCC1  
S G F G G L P S L A Q V H A A S T R O A L R P R A O G P V G A A A E  
GCAGGTGGGCGGCGAGTCGCAGCTGGTCTCCGCGCAGGTTCCCAAGGTATGGGCGGACCGTAGGCATGGGCGGCGATGCACCCCTCTTGGGGGGCTCG  
CGTECAGCGCGCGCTCAGCGTCGACCAAGAGCGCGTCCCAAGGTTCCATACCGCGCTGGGCATCCGTACCGCGGCTACGTGGGGAGAAGCCCCCGCAGC 1500  
hTCC1  
O V G G O S O L V S A O G S O G N G G P V G N G G H H P S S G A S  
AAAGGGACGACGAAGAAGTACTCGGAAGCGCGCGCGGCGGCACTGAAGACCGCGAGCGCGCGCTAGTCGAAGCTGACGCGGGCGGTGGGCAAAAGG  
TTTCCTGTGCTGCTTCTTCATGAGCCTTCGCGCGCGCGCGCGTGAATTC TGGCGCTCGCGCGCGGTGAGCTTCGACTGCGCGCGCGCCACCGTTTTC 1600  
hTCC1  
X G T T T K K Y S E G A A A G T E D A E R A P V E A D A G G G O K  
TGCTGTACGAAACGTCGTCTAAGAATTC  
ACGACCATGCTTTGCAGCAGATTCTTAAG 1629  
hTCC1 EcoRI  
V L V R N V V E F

FIG. 8

Sheet 2 of 2

Thursday, July 22, 1999 1:35 PM

TCC1(-TO.1).mpd (1 > 1225) Site and S

Enzymes: 2 of 513 enzymes (Filtered)

Settings: Linear, Certain Sites Only, Standard Genetic Code

HTCC-1 (T.M.1)

Page 1

CAATGCAATCAACATCAACATCAGATGAGCAGAGCTTCATCATGATCCAAAGATCAGTGCCATTGACGGCTTGTACGACCTTCTGGGGATTGGAATAC  
GTATACGTAGTGGTAGTGGTAGTGTACTCGTCTCGCAASTAGTAGTAGTGTGCTAGTACAGGTAACGCGGAACATGCTGGGAAGACCCCTAACCTTATG 100  
| Mel / HIS TAG | | HTCC1 |  
N M H H H H H H M S R A F I I O P T I S A I O G L Y O L L G I G I  
CCAACCAAGGGGGTATCCTTTACTCTCTACTAGAGTACTTCCAAAAAGCCCTGGAGGAGCTGGCAGCAGCGTTTCCGGGTGATGGCTGGTTAGGTTCCGC 200  
GGTTGGTTCCCCATAGGAAATGAGGAGTGATCTCATGAAGCTTTTTCGGGACCTCTCTGACCGTCTGTCGAAAGGCCACTACCGACCAATCCAAGCCG  
| HTCC1 |  
P N O G G I L Y S S L E Y F E K A L E E L A A A F P G O G W L G S A  
CGCGGACAAATACCGCGGCAAAAACCGCAACCAAGTGAATTTTCCAGGAACGTCGACGCTCGATCGTCAGCTCATCAGCTGATCCACGACAGGCGC 300  
GGCGCTGTTTATCCCGCGCTTTTGGCGTTGGTGCACCTTAAAAAGGTCTTACCGCTCTGGAGCTACCACTCCAGTACTCCGACTAGCTGCTGGTCCGG  
| HTCC1 |  
A O K Y A G K N R N H V N F F O E L A O L D R O L I S L I H D O A  
AAGCGGTCCAGACGACCCCGGACATCTTGGAGGGCGCCAAGAAAGGTCTCGAGTTCGTGCGCCCGGTGGCTGTGGACCTGACCTACATCCCGGTGGTGG 400  
TTGCGCCAGGTCTGCTGGGGCGCTGTAGGACCTCCCGCGGTCTTTCCAGAGCTCAAGCACGCGGGCCACCGACCTGGAGTGGATGTAGGGCCAGCAGC  
| HTCC1 |  
N A V Q T F R O I L E G A X K G L E F V R P V A V O L T Y I P V V  
GGCAGCGCCTATCGCGCGCTTCCAGGCGCGTTTTGGCGGGCGCGATGGCGGTAGTGGGGCGCGCGCTTAAGCTTGCTACTTGGTCTGTGAAAACGCT 500  
CCGTGCGGGATAGCGCGGGAAGGTCCCGGCAAAAACGCGCGCGCTACCGGATCACC CGCGCGCGGAATTCGAACGGATGAACAGCACTTTGGGA  
| HTCC1 | | Hind3 | DELETED |  
G H A L S A A F O A P F C A G A H A V V G G A L X L A Y L V V X T L  
GATCAACCGGAAGCTTACTCAACTCTCAAATTGCTTGCCAAATTTGGCGGAGTGGTTCGCGCGCGCCATTGCGGACATCATTTGGGATGTGGCGGACATC 600  
CTAGTTGGCTTCGAATGAGTTGAGGAGTTTAACGAACGGTTTAACCGCTCAACCAAGCGCGCGGGAACGCTGTAGTAAAGCTACACCGCTGTAG  
| DELETED | | Hind3 | | HTCC1 |  
I N A K L T O L L X L L A X L A E L V A A A I A O I I S D V A O I  
ATCAAGGGCATCCTCGGAGAAGTGTGGGAGTTCATCAAAACGCGCTCAACGGCTTGAAGAGCTTTGGGACAAGCTCAGGGGTGGGTGACCGGACTGT 700  
TAGTTCCCGTAGGAGCTCTTCACACCTCAAGTAGTGTGGCGGAGTTGCCGGACTTTCTCGAAACCTGTTTCGAGTGCCCCACCACTGGCGCTGACA  
| HTCC1 |  
I K G I L G E V W E F I T N A L N G L K E L W O K L T G W V T G L  
TCTCTGAGGGTGGTCCGAACCTGGAGTCTCTTTTGGCGGGCTCCCCGCTTGACCGGCGCGACAGCGGCTTGTGCGAAGTCACTGCTTGTTCGGTGC 800  
ACAGAGCTCCACCAAGCTTGGACCTCAGGAAGAAACGCGCGAGGGGCGGAAGTGGCGCGCTGGTCCCGAAGAGCTTCACTGACCGAACAAGCCAGC  
| HTCC1 |  
F S R G W S N L E S F F A G V P G L T G A T S G L S O V T G L F G A  
GGCGGCTCTGTCGCACTGTCGGGCTTGGCTCACCGCGATAGCTGGCGAGCTCAGCCAGCTTGCCCGCCCTGGCGGGCATTTGGGGGCGGGTCCGGTTTT 900  
CCGGCCAGACAGGCGTAGCAGCCCGAACCAGTGGCGCTATCGGACCGCTCGAGTGGTTCGAACGGGCGGGAGCGGCGTAACCCCGCCAGGCCAAAA  
| HTCC1 |  
A G L S A S S G L A H A O S L A S S A S L P A L A G I G G G S G F

FIG. 9a



Thursday, July 22, 1999 1:35 PM

Page 2

FCC1(-TD.1).mod (1 > 1225) Site and S an

3GGGGCTTGCCGAGCCTGGCTCAGGTCCATGCCGCTCAACTGGGCAAGGCGCTACGGCCCCGAGCTGATGGCCGCGTCCGGCGCGCTGCCGAGCAGGTCCG  
CCCCGAACGGCTCGGACCGAGTCCAGGTACGGCGGAGTTGAGCCGTCCCGATGCCGGGGCTCGACTACCGGGCCAGCCCGGGGACGGCTCGTCCAGC

1000

hTCC1

G G L P S L A Q V H A A S T R Q A L R P R A Q G P V G A A A' E Q V

GCGGGCAGTCGCAGCTGGTCTCCCGCAGGGTTCCCAAGGTATGGCGGACCCGTAGGCATGGCGGGCATGCACCCCTCTTCGGGGGCGTCGAAAGGGAC  
CGCCCCGTCAGCGTCGACCAGAGGCGGTCCCAAGGGTTCCATACCCGCTGGGCATCCGTACCCGCGGTACGTGGGAGAAGCCCCCGCAGCTTTCCTG

1100

hTCC1

G G Q S Q L V S A Q G S Q G M G G P V G M G G M H P S S G A S K G T

GACGACGAAGAAGTACTCGGAAGGCGCGGGCGGGCACTGAAGACGCCGAGCGCGGCCAGTCGAAGCTGACGCGGGCGGTGGGCAAAAGGTGCTGGTA  
CTGCTGCTTCTTCATGAGCCTTCGCGCGCGCGCGCGGTGACTTCTGGGGCTCGCGCGCGGTACGCTTCGACTGCGCCCCGCCACCCGTTTTCCACGACCAT

1200

hTCC1

T T K K Y S E G A A A G T E Q A E R A P V E A Q A G G G Q K V L V

CGAAACGTCGTCTAACGGCGAATTC

1225

GCTTTGCAGCAGATTGCCGCTTAAG

hTCC1

EcoRI

R N V V . R R I

FIG. 9a

Friday, July 23, 1999 8:41 AM

HTCC1(H)-TM2 Map.MPD (1 > 1225) : 397 Sequence

Enzymes: 1 of 515 enzymes (Filters)

Settings: Circular, Certain Sites Only, Standard Genetic Code

HTCC-1 (1M-2)

Page 1

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CATATGCATCACCATCACCATCACATGAGCAGAGCGTTTCATCATCGATCCAACGATCAGTGCCATCGACGGCTTGACGACCTTCTGGGGA
91
GTATACGTAGTGGTAGTGGTAGTGTACTCGTCTCGCAAGTAGTAGCTAGGTTGCTACTCACGGTAAGTGGCGAATGCTGGAAGACCCCT
HTCC1
M M H H H H H H M S R A F I I O P T I S A I O G L Y O L L G
TTGGAATACCCAACCAAGGGGGTATCCTTTACTCCTCACTAGAGTACTTCGAAAAAGCCCTGGACGAGCTGGCAGCAGCGTTTCGGGTGA
182
AACCTTATGGGTGGTTCCTCCCATAGGAAATGAGGAGTGATCTCATGAAGCTTTTTCGGGACCTCTCGACCGTCGTCGCAAGGCCCACT
HTCC1
I G I P N Q G G I L Y S S L E Y F E X A L E E L A A A F P G O
TGCGTGGTTAGGTTTCGGCCGCGGACAAATACGCCGCAAAAACCGCAACCCGTAATTTTTCCAGGAAGTGGCAGACCTCGATCGTCAG
273
ACCGACCAATCCAAGCCGCGCGCTGTTATGCGGCGGTTTTGGCGTTGGTGCACCTAAAAAGGTCCTTGACCGTCTGGAGCTAGCAGTC
HTCC1
G W L G S A A D K Y A G K N R N H V N F F Q E L A D L D R Q
CTCATCAGCCTGATCCACGACCAAGGCCAACGCGGTCCAGACGACCCGCGACAAGCTTATCCTGGAGGGCGCCAAGAAAGGTCTCGAGTTCC
384
GAGTAGTCGGACTAGGTGCTGGTCCGGTTGCGCCAGGTCTGCTGGGCGCTGTTTGAATAGGACCTCCCGCGGTCTTTCCAGAGCTCAAGC
HTCC1 Hind3 DELETED
L I S L I H D O A N A V Q T T R D K L I L E G A K K G L E F
TGCGCCCGGTGGCTGTGGACCTGACCTACATCCCGGTGCTCGGGCAGCGCCCTATCGGCCGCTTCCAGGCGCGGTTTTGCGCGGGCGCGAT
455
ACGCGGGCCACCGACACCTGGACTGGATGTAGGGCCAGCAGCCGTGCGGGATAGCCGGCGGAAGGTCCGCGGCAAAACGCGCCCGCGCTA
DELETED
V R P V A V O L T Y I P V V G H A L S A A F Q A P F C A G A M
GGCCGTAGTGGGCGSCGCGCTTGCTACTTGGTCTGTGAAAACGCTGATCAACGCGACTCAACTCTCAAATTGCTTGCCAAATTGGCGGAG
546
CCGGCATCACCCGCGCGCGAAGCGGATGAACAGCACTTTTGGACTAGTTGCGCTGAGTTGAGGAGTTTAACGAACGGTTTAACCGCCTC
DELETED
A V V G G A L A Y L V V K T L I N A T Q L L K L L A K L A E
TTGGTCCGCGCGCCATTGCGGACATCATTTGCGATGTGGCGGACATCATCAAGGCGATCGTCGGAGAAGTGTTGGGAGTTTCATCACAACG
637
AACCAGCGCGCGCGTAACGCCCTGTAGTAAAGCCTACACCGCTGTAGTACTTCCCGTAGGAGCTCTTCACACCTCAAGTAGTGTTCG
DELETED
L V A A A I A O I I S D V A D I I K G I L G E V W E F I T N
CGAAGCTTCTCAACGGCCTGAAAGAGCTTTGGGACAAGCTCACGGGTTGGGTGACCGGACTGTTCTCTCGAGGGTGGTCAACCTGGAGTC
728
GCTTCGAAGAGTTGCCGGACTTTCTCGAAACCTGTTGAGTGCCCCACCCACTGGCTGACAAGAGAGCTCCACACGCTTGGACCTCAG
Hind3 HTCC1
A K L L N G L K E L W D K L T G W V T G L F S R G W S N L E S
CTTCTTTGCGGGCGTCCCGGCTTGACCGCGCGGACAGCGGCTTGTGCGAAGTACTGGCTTGTTCGGTGCGGCGGCTGTGTCGCGATCG
819
GAAGAAACGCGCGCAGGGGCGGAAGTGGCCGCGCTGGTTCGCGAAGCGGTTCACTGACCGAACAAGCCACGCGCGGCGGACAGCGGTAGC
HTCC1
F F A G V P G L T G A T S G L S O V T G L F C A A G L S A S
```

FIG. 9d

Friday, July 23, 1999 9:41 AM

Page 2

htCC1(h)-TM2 Mac.MPD (1 > 1225) Sequence

```
TCGGGCTTGGCTCACGGGATAGCCTGGCGAGCTCAGCCAGCTTGCCCCCCTGGCCGGCATTGGGGGGGGSTCCGGTTTTGGGGGCTTGC
AGCCCCAACCAGTGCGCCATATCGGACCGCTCGAGTCGGTCCAACGGGCGGGACCGCGTAACCCCGCCAGGCCAAAACCCCGAACG
S:10
-----htCC1-----
S G L A H A D S L A S S A S L P A L A G I G G G S G F G G L
CGAGCCTGGCTCAGGTCCATGCCGCTCAACTGGGAGGCGCTACGGCCCCGAGCTGATGCCCGGTGGGGCGCGCTGCCGAGCAGGTCCG
1001
GCTCGGACCGAGTCCAGGTACGGCGGAGTTGAGCCGTCCCGATGCCGGGGCTCGACTACCGGGCCAGCCGCGGCGAGGCTCGTCCAGCC
-----htCC1-----
P S L A Q V H A A S T R Q A L R P R A D G P V G A A A E Q V G
CGGGCAGTCGCAGCTGGTCTCCGCGCAGGGTTCCCAAGGTATGGGCGGACCCGTAGGCATGGCGGGCATGCACCCCTCTTCGGGGGGCGTCG
1092
GCCCCGCAGCGTCGACCAGAGGCGCGTCCCAAGGGTTCCATACCGGCTGGGCATCCGTACCCGCGGTACGTGGGGAGAAGCCCCCGCAGC
-----htCC1-----
G Q S Q L V S A Q G S Q G M G G P V G M G G M H P S S G A S
AAAGGGACGACGACGAAGAAGTACTCGGAAGGCGCGGGCGGGCACTGAAGACGCGAGCGCGGCCAGTCGAAGCTGACCGGGGCGGTG
1183
TTTCCCTGCTGCTGCTTCTTCATGAGCCTTCGCGCGCGCGCCCGTGACTTCTGCGGCTCGCGCGCGGTGAGCTTCGACTGCGCCCCGCCAC
-----htCC1-----
K G T T T X X Y S E G A A A G T E O A E R A P V E A D A G G
GGCAAAAGGTGCTGGTACGAAACGTGCTCTAACGGCGAATTC
1225
CCGTTTTCCACGACCATGCTTTGCAGCAGATTGCCGCTTAAG
-----htCC1----- EcoRI
G Q X V L V R N V V R R I
```

FIG. 4d

Monday, July 25, 1999 2:45 PM

ht(184-392)-H9-ht(1-200).mpd (1 > 24) Sequence

Enzymes: 3 of 315 enzymes (Filtered)

Settings: Linear, Certain Sites Only, Standard Genetic Code

Page 1

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CATATGCATCACCATCACCATCAGATGTGGCGGACATCATCAAGGGCATCTCGGAGAAGTGTGGGAGTTTCATCACAACGGGCTCAACGGCCTGAAGG
GTATACCTAGTGGTAGTGGTAGTGTCTACACCCCTGTAGTAGTTCCTAGGAGGCTTTTCACACCCCTCAAGTAGTGTTCGCGGAGTTGCGGAGCTTTC
100
Met / HIS TAG hTCC1 (184-392)
H H H H H H H H O V A O I I X G I L G E V W E F I T N A L N G L K
AGCFTTGGGACAAGCTCACGGGCTGGGTGACGGGACGTTCCTCGAGGGTGGTCCAACTGGAGTCTCTCTTCGCGGCTCCCGGGCTTGACCGGGC
TCGAAACCTGTTCGAGTCCCCACCCACGTGGCCTGACAAGAGAGCTCCACCAGCTTGGACCTCAGGAAGAAACGCCCGCAGGGCGGCAACTGGCGCG
200
hTCC1 (184-392)
E L W O X L T G W V T G L F S R G W S N L E S F F A G V P C L T G A
GACCAGCGGCTTGTTCGCAAGTGAAGTGGCTTGTTCGGTGGCGGGCTGTGTCCGCATCGTGGGCTTGGCTCAGCGGATAGCCTGGCGAGCTCAGCCAGC
CTGGTCGCGCAACAGCGTTCACTGACCGAACAAGCCAGCGCGCCAGACAGGCGTAGCAGCCGCAACCGAGTGGCGCTATCGGACCGCTCGAGTGGGTGG
300
hTCC1 (184-392)
T S G L S Q V T G L F G A A G L S A S S G L A H A O S L A S S A S
TTGCCCGCCCTGGCGGGCATTGGGGGGGGTTCGGGTTTGGGGGCTTCCGAGCCTGGCTCAGGTCTATGCCGCTCAACTCGGCAGGCGCTACGGCCCT
AACGGCGGGGACCGCGCTAACCCCGGGCAGGCCAAAAACCCCGAACGGCTCGGACCGAGTCCAGGTACGGCGGAGTTGAGCGCTCCGGCATGCCGGGG
400
hTCC1 (184-392)
L P A L A G I G G G S G F G G L P S L A Q V H A A S T R O A L R P
GAGCTGATGGCCCGTCCCGCCCGCTGCCGAGCAGGTGGCGGGCAGTCCGAGCTGGTCTCCGCGCAGGGTTCCCAAGGTATGGGCGGACCCGTAGGCAT
CTCGACTACCGGGCCAGCGCGGGGACGGCTCGTCCAGCGCGCGCTCAGCGTTCAGCAGAGGGCGGTCCCAAGGGTTCCATACCCGCTGGGCATCCGTA
500
hTCC1 (184-392)
R A D G P V G A A A E O V G G Q S O L V S A Q G S O G M G G P V G M
GGCGGGCATGCACCCCTCTTCGGGGGGCTCGAAAGGAGCAGCAGCAAGAAGTACTCGGAAGGGCGGGCGGGCGGCACTCAAGACGGCCGCGCGGCCA
CCGCGGTACGTGGGAGAGAAGCCCGGAGCTTTCCTGCTGCTGCTTCTTCATCAGCCTTCGGCGGCGCGGCGGCTGACTTCTGGGGCTCGCGCGGGT
600
hTCC1 (184-392)
G G M H P S S G A S K G T T T X X Y S E G A A A G T E O A E R A P
GTCAAGCTGACGCGGGCGGTGGGCAAAAGGTGCTGGTACGAAACGTCGTGCAATTCATGGTGGATTTCGGGGCGTTACCACCGGAGATCAACTCCGCGA
CAGCTTCGACTGCGCCCGCCACCCGTTTTCACGACCATGCTTTGCAGCAGCTTAAGTACCACCTAAAGCCCGCAATGGTGGCCTCTAGTTGAGGCGCT
700
hTCC1 (184-392) EcoRI Tbh9
V E A O A C G G O K V L V R N V V E F M V O F G A L P P E I N S A
GGATGTACGCGGGCCGGTTCGGCTCGCTGGTGGCGCGGCTCAGATGTGGGACAGCTGGCGAGTGACCTGTTTTTCGCGCGGCTCGGCGTTTCAGTC
CCTACATGCGGGCGGGCCCAAGCCGGAGCGACACCGCGCGGAGTCTACACCTGTTCGACCGCTCACTGGACAAAAGCCGCGCAGCCGCAAGTCAG
800
Tbh9
R M Y A G P G S A S L V A A A Q M W D S V A S O L F S A A S A F Q S
GGTGGTCTGGGCTGTGACGGTGGGGTGGTGGATAGTTCGTTCGGCGGGTCTGATGGTGGCGGGCGGCTCGCGGATGTGGCGTGGATGAGCGTCAACCGG
CCACCAGACCCAGACTGCCACCCAGCACCTATCAAGCAGCGCGCCAGACTACCACCGCGCGCGGCGGATACACCGCACCTACTCGCAGTGGCCG
900
Tbh9
V V V G L T V G S W I G S S A G L M V A A A S P Y V A W H S V T A
```

FIG. 12

### 10 and 9 sentence

३५५

FIG. 12

Monday, July 28, 1999 2:45 PM

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N1343921-H9-n1(1-200).mod (1 > 244)

File # Sequence

```
GGATTGGAATACCCAACCAAGGGGGTATCCTTTACTCCTCACTAGAGTACTTCGAAAAAGCCCTGGAGGAGCTGGCAGCAGCGTTTCGGGGTGATGGCTG
2000
CCTAACCTTATGGGTTGGTTCCCCCATAGGAAATGAGGAGTGATCTCATGAAGCTTTTTCGGGACCTCCTCGACGGTCTCGCAATAGGCCCACTACCGAC
-----HTCC1 (1-200)-----
G I G I P N O G G I L Y S S L E Y F E K A L E E L A A A F P, G D G V
GTTAGGTTTCGGGCGGGGACAAATACGCCGGCAAAAACCGCAACCACGTGAATTTTTCAGGAACCTGGCAGACCTCGATCGTCAGCTCATCAGCCGTGATC
2100
CAATCCAAGCCGGCGCTGTTTATGCGGCGGTTTTTGGCCTTGGTGCACITAAAAAAGGTCTTGACCGTCTGGAGCTAGCAGTCCAGTACTCGGACTAG
-----HTCC1 (1-200)-----
L G S A A D K Y A G K N R N H V N F F Q E L A D L D R O L I S L I
CAGGACCAGGCCAACCGGTCAGACGACCGCGACATCCTGGAGGGCGCCAAAGAAAGGTCTCGAGTTCTGTCGGCCCGGTGGCTGTGGACCTGACCTACA
2200
GTGCTGCTCCGGTTGCGCCAGGTCTGCTGGGCGCTGAGGACCTCCCGCGGTTCTTTCCAGAGCTCAAGCAGCGGGCCACCGACACCTGGACTGGATGT
-----HTCC1 (1-200)-----
H D Q A N A V Q T T R O I L E G A X X G L E F V R P V A V O L T Y
TCCCGGTCGTCGGGCACGCCCTATCGGCCGCCCTTCCAGGCGCCGTTTTGCGCGGGCGCGATGGCCGTAGTGGCGGGCGCGCTTGCCCTACTTGGTCGTGAA
2300
AGGCGCCAGCAGCCGTCGCGGGATAGCGCGCGGAAGGTCCGCGGCAAAACGCGCCCGCTACCGGCATCACCGCCCGCGGSAACGGATGAACCAAGCACTT
-----HTCC1 (1-200)-----
I P V V G H A L S A A F Q A P F C A G A M A V V G G A L A Y L V V K
AACGCTGATCAACCCCACTCAACTCCTCAAATTGCTTGCCAAATTTGGCGGAGTTGGTTCGCGGGCCGCCATTGCGGACATCATTTCCGATGTGGCGGACATC
2400
TTGCGGACTAGTTGCGCTGAGTTGAGGAGTTTAACGAACGTTTAACCGCCTCAACCAGCGCCCGCGGTAACGCTGTAGTAAAGCCTACACCGCCTGTAG
-----HTCC1 (1-200)-----
T L I N A T Q L L K L L A X L A E L V A A A I A D I I S D V A C I
ATCAAGGGCATCCTCGGAGAAGTGTGGGAGTTTCATCTAAGATATC 2445
TAGTTCCCGTAGGAGCCTCTTCACACCCCTCAAGTAGATTCTATAG
-----HTCC1 (1-200)----- RV
I K G I L G E V W E F I D I
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FIG. 12